

CLAIMS

1. A display controller, comprising:

a processor (62) for providing row selection signals for a display
comprising M rows of pixels, wherein the row selection signals comprise a
respective row selection pulse (52, 54, 56) for each row, and the row selection
pulses (52, 54, 56) have respective durations ($t_1, t_2, t_3 \dots t_M$) that increase from
the pulse for row 1 to the pulse for row M, the increase in the pulse duration
being one of the following:

(a) on a row-by-row basis; or

(b) on a set of rows-by-set of rows basis, where a set of rows comprises
plural consecutive rows; or

(c) on a mixture of a row-by-row basis and a set of rows-by-set of rows
basis, where a set of rows comprises plural consecutive rows.

2. A display controller according to claim 1, wherein the processor
(62) is further for receiving image data (72) for the display, and retiming the
image data (72) for synchronisation with the increase in the row selection
pulse duration.

3. A display controller according to claim 2, further comprising a
buffer (64), wherein the buffer (64) and the processor (62) are arranged for the
processor (62) to retime the data by writing incoming data (72) in to the buffer
(64) at the rate the incoming data (72) is received and reading the data out
from the buffer (64) at a row rate corresponding to the increase in the row
selection pulse duration.

4. A display controller according to any of claims 1 to 3, wherein the
number of rows in a given set is less than the number of rows in one or more
preceding sets.

5. A display controller according to any of claims 1 to 4, wherein the total duration of the row selection pulses for all the rows is substantially equal to a frame time, less a setting up time for a frame, of the display.

5 6. A display device, comprising an array of pixels arranged in M rows and N columns, a row driver circuit (30), and a display controller (40), the display controller (40) being arranged to provide row selection pulses (52, 54, 56) to the row driver circuit (30), the row selection pulses (52, 54, 56) having respective durations (t_1 , t_2 , t_3 ... t_M) that increase from the pulse for row 1 to the
10 pulse for row M, the increase in the pulse duration being one of the following:
(a) on a row-by-row basis; or
(b) on a set of rows-by-set of rows basis, where a set of rows comprises plural consecutive rows; or
(c) on a mixture of a row-by-row basis and a set of rows-by-set of rows
15 basis, where a set of rows comprises plural consecutive rows.

7. A display device according to claim 6, wherein the processor (62) is further for receiving image data (72) for the display, and retiming the image data (72) for synchronisation with the increase in the row selection pulse
20 duration.

8. A display device according to claim 7, further comprising a buffer (64), wherein the buffer (64) and the processor (62) are arranged for the processor (62) to retime the data (72) by writing incoming data (72) in to the
25 buffer (64) at the rate the incoming data (72) is received and reading the data out from the buffer (64) at a row rate corresponding to the increase in the row selection pulse duration.

9. A display device according to any of claims 6 to 8, wherein the
30 number of rows in a given set is less than the number of rows in one or more preceding sets.

10. A display device according to any of claims 6 to 9, wherein the total duration of the row selection pulses for all the rows is substantially equal to a frame time, less a setting up time for a frame, of the display.

5 11. A method of driving a display device, the display device comprising an array of pixels arranged in M rows and N columns, the method comprising:

providing row selection pulses (52, 54, 56) to each row in turn, the row selection pulses (52, 54, 56) having respective durations ($t_1, t_2, t_3 \dots t_M$) that
10 increase from the pulse for row 1 to the pulse for row M, the increase in the pulse duration being one of the following:

(a) on a row-by-row basis; or

(b) on a set of rows-by-set of rows basis, where a set of rows comprises plural consecutive rows; or

15 (c) on a mixture of a row-by-row basis and a set of rows-by-set of rows basis, where a set of rows comprises plural consecutive rows.

12. A method of driving a display device according to claim 11, further comprising retiming image data (72) for synchronisation with the
20 increase in the row selection pulse duration.

13. A method of driving a display device according to claim 12, wherein the step of retiming image data (72) comprises writing incoming data (72) in to a buffer (64) at the rate the incoming data (72) is received and
25 reading the data out from the buffer (64) at a row rate corresponding to the increase in the row selection pulse.

14. A method of driving a display device according to any of claims 11 to 13, wherein the number of rows in a given set is less than the number of
30 rows in one or more preceding sets.

15. A method of driving a display device according to any of claims 11 to 14, wherein the total duration of the row selection pulses for all the rows is substantially equal to a frame time, less a setting up time for a frame, of the display.